Remarks:

Claim 1 has been rejected under 35 U.S.C. 102(e) as being anticipated by USP 6,971,771, Kanematsu et al.

Kanematsu '771 discloses a method for making a composite optical component. Referring to Figures 13 and 14 in '771, an optical functional device 110 defines two ribs 110a, and these ribs 110a further define hemispherical contact protrusions 110b. These ribs 110a and their corresponding protrusions 110b are inserted lengthwise into U-shaped channels 111a in the holding device 111 until the side edges of the optical device and the channels are aligned.

Claim 1 as now amended reads as follows:

1. (currently amended) A process for making a composite profile, including at least one core piece and one insert piece, each having a top surface and a bottom surface, and a length extending from a first end to a second end, and each having substantially the same profile from its first end to its second end, wherein said core piece defines a first channel sized to receive said insert piece, said channel extending lengthwise from said first end to said second end, comprising the steps of:

providing a crush rib between the bottom surface of the insert piece and the channel;

inserting said insert piece downwardly into said first channel, with the top surface of the insert initially above the top surface of the core; and

pressing said insert piece downwardly into said first channel to deform the crush rib until the top surfaces of the insert and the core are aligned.

The amended claim 1 makes it clear that the crush rib is between the bottom surface of the insert piece and the channel and that the insert piece is inserted downwardly into the first channel to deform the crush rib until the top surfaces of the insert and the core are aligned. Of course, the parts may be oriented in any direction within the scope of this claim (i.e., the core and insert may be upside down or sideways), but the relative positions and directions between the insert and the core are defined by the claim. Thus, if the crush rib is between the bottom surface of the insert piece and the channel, then inserting the insert piece downwardly means inserting it toward the crush rib, so that, as the insert is inserted, the crush rib is deformed until the top surfaces of the insert and the core are aligned. Looking at the Kanematsu reference, if the protrusions 110b are considered to be on the top and bottom surfaces of the insert, then the insert is not inserted downwardly but rather is inserted sideways, in a direction perpendicular to the downward direction, and the surfaces that come into alignment are the side surfaces, not the top surfaces.

The Kanematsu design is such that the insert cannot be inserted downwardly in the direction of the projection in order to deform the projection and bring the top surfaces of the insert and core into alignment as claimed. If one attempted to insert the part 110 downwardly (in the direction of the projection), the ribs would bump into the sides of the enclosure 111, preventing insertion. The only way the insert of Kanematsu can be inserted is in a sideways direction, perpendicular to the downward direction. Thus, Kanematsu does not teach or suggest what is recited in claim 1.

If the protrusions are considered to be on the top and bottom surfaces of the insert of Kanematsu, then the purpose of the protrusions is to allow the insert to slide sideways in the channel with minimal resistance, while the purpose of the crush rib as recited in claim 1 is entirely different. The crush rib recited in claim 1 permits the product to be manufactured at a reasonable cost, without requiring the parts to be made to very precise tolerances. The crush rib provides leeway, so the top surfaces of the final product can be brought into alignment even if the parts are not perfectly sized. This is not taught or suggested by Kanematsu.

For the foregoing reasons, claim 1 recites an invention that is both novel and unobvious in view of the prior art.

Claim 2 was rejected based on Kanematsu and Ogi. Claim 2 has been amended to the following:

2. A process for making a composite profile, including at least one core piece and one insert piece, each having a top surface and a bottom surface, and a first end and an opposite second end, wherein said core piece defines a first channel sized to receive said insert piece, comprising the steps of:

providing a crush rib between the bottom surface of the insert piece and the channel;

inserting said insert piece downwardly into the first channel of said core piece, with the top surface of the insert piece initially above the top surface of the core piece;

pressing said insert piece downwardly into said first channel to crush the crush rib until the top surfaces of the insert and the core are aligned, thereby forming a core and insert assembly; and

passing the core and insert assembly through an extrusion die to apply a coating.

Kanematsu does not teach inserting the insert piece downwardly into the channel to crush the crush rib until the top surfaces of the insert and the core are aligned as recited in claim 2.

Ogi '947 discloses a method for manufacturing hollow plastic articles by filling a jointing groove between the parts with heated and plasticized or molten plastic material to fuse the plastic material of the articles at their contact surfaces. Ogi does not coat the part but only fills a groove in the part in order to fuse the parts together.

In Ogi, the hollow plastic articles are held together by suitable jigs or fixtures (See Column 3, lines 36 – 38), and the molten plastic is injected only at the jointing groove so as to fuse the contact surfaces of the articles to secure the articles together into a single piece. The use of jigs or fixtures to hold the two parts together would make it impossible to feed the part through an extrusion die to coat the part as recited in claim 2.

There also would be no reason to fuse the parts of Kanematsu together as taught by Ogi, since the entire purpose of Kanematsu is to allow the parts to slide freely relative to each other. In other words, fusing the parts of Kanematsu together would defeat the entire purpose of the Kanematsu design. Since defeating the entire purpose of a design cannot be considered to be obvious to a person of ordinary skill in the art, the combination of Kanematsu and Ogi cannot be obvious. Further, even if the two references were combined, they would not make the invention recited in claim 2.

Therefore, claim 2 recites an invention that is both novel and unobvious in view of Kanematsu and Ogi.

With respect to claim 4, if the angled sides of the guide in Figure 11 of Kanematsu are considered to provide a wider gap near the top than further into the core, then the crush rib is between the side of the insert and the core, not between the bottom of the insert and the core.

With respect to claim 5, Kanematsu does not teach forming a wider gap by providing a recessed shoulder on the insert. Instead, Kanematsu makes the gap wider by flaring the sides of the core.

Claim 7 recites a recessed shoulder on the side surface of the insert, forming a gap between the core and the insert above the recessed shoulder, with the gap being filled with the coating. Such a gap 40 is shown in Figure 7 of the present application, directly above the shoulder on the insert. Figure 1 of the Ogi reference shows a shoulder 5, but the connecting piece follows the shape of the shoulder, so a gap is not formed above the recessed shoulder as claimed.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanematsu '771 in view of DeRees, USP 5,670,109.

DeRees '109 discloses a method for assembling vehicle body members using an injected adhesive which flows through a predesigned channel cavity formed at the interface of the vehicle body members. As indicated in Column 3, lines 4-8, the body components may be held together by mechanical devices (such as bolts) so that the adhesive injection process may be carried out.

Kanematsu '771 requires the insert 110 to be able to slide within the core 111 to ensure that the insert 110 will not distort due to thermal stresses. The use of adhesives in the Kanematsu reference to fix the insert and core together would render the device non-functional. It cannot be considered to be obvious to a person of ordinary skill in the art to modify a design so that it will not function.

Since all the claims recite an invention that is both new and unobvious in view of the prior art, Applicant respectfully requests allowance of all the claims now pending in the present application. If there are any remaining problems with this application, Applicant's attorney would appreciate a call from the Examiner to help expedite their resolution.

Respectfully submitted,

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